

## CLAIMS

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1 1. A method for satisfying a request for content from a web server, said  
2 method comprising:

3 (a) determining whether a response to the request can be delayed;

4 (b) processing the request to obtain the response in an intentionally  
5 delayed manner when said determining (a) determines that the response to  
6 the request can be delayed; and

7 (c) processing the request without any intentional delay when said  
8 determining (a) determines that the response to the request cannot be  
9 delayed.

1 2. A method as recited in claim 1, wherein said processing (b) allows a  
2 group of requests for the same content to be processed together so as to  
3 reduce congestion at the web server.

1 3. A method as recited in claim 1, wherein the intentionally delayed  
2 manner is based on a predetermined delay.

1 4. A method as recited in claim 3, wherein the intentionally delayed  
2 manner is based on at least one of a time delay and a quantity threshold.

1 5. A method for sending data over the Internet, said method comprising:

2 receiving a plurality of requests for a particular resource provided at a  
3 remote server on the Internet, the plurality of requests being provided by  
4 different requestors;

5 retrieving the particular resource from the remote server once for the  
6 plurality of requests to obtain the particular resource requested by the plurality  
7 of requests; and

8 thereafter sending the particular resource to the different requestors.

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1 6. A method as recited in claim 5, wherein the plurality of requests for the  
2 particular resource are all received within a predetermined period of time.

1 7. A method as recited in claim 6, wherein said requesting is performed  
2 after the oldest one of the plurality of requests has been delayed for the  
3 predetermined period of time.

1 8. A method as recited in claim 5, wherein said requesting is performed  
2 after a predetermined quantity of the plurality of requests have been received.

1 9. A method as recited in claim 5, wherein said requesting is performed  
2 after the oldest one of the plurality of requests has been delayed for the  
3 predetermined period of time or after a predetermined quantity of the plurality  
4 of requests have been received.

1 10. A method as recited in claim 9, wherein said sending of the particular  
2 resource to the different requestors comprises:

3 forming multi-destination data packets to carry data of the particular  
4 resource; and

5 transmitting the multi-destination data packets.

1 11. A method as recited in claim 5, wherein said sending of the particular  
2 resource to the different requestors comprises:

3 forming multi-destination data packets to carry data of the particular  
4 resource; and

5 transmitting the multi-destination data packets.

1 12. A method as recited in claim 5, wherein a data distribution center is  
2 coupled to the Internet to assist with the transfer of data, and

3 wherein said sending of the particular resource to the different  
4 requestors comprises:

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5 forming multi-destination data packets to carry data of the  
6 particular resource;  
7 transmitting the multi-destination data packets from the remote  
8 server to the data distribution center;  
9 converting the multi-destination data packets received at the  
10 data distribution center into single destination data packets; and  
11 transmitting the single-destination data packets from the data  
12 distribution center to the different requestors, thereby delivering the particular  
13 resource requested to the different requestors.

1 13. A method for servicing a request for a resource over a data network,  
2 said method comprising:

- 3 (a) receiving requests for resources;  
4 (b) temporarily storing the requests for resource in a queue;  
5 (c) identifying a request in the queue for a particular resource that has  
6 been waiting for more than a predetermined period of time;  
7 (d) requesting data for the identified request for the particular resource  
8 from a remote content server;  
9 (e) forming multi-destination data packets for responses to the  
10 identified request and other requests in the queue for the particular resource;  
11 and  
12 (f) transmitting the multi-destination data packets.

1 14. A method as recited in claim 13, wherein said forming (e) forms the  
2 multi-destination data packets for responses to the identified request and  
3 other of the requests in the queue for the particular resource that are destined  
4 for the same geographical region.

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1 / 15. A data transmission system for transmitting data from content servers  
2 to requestors through a data network, said data transmission system  
3 comprising:

4 a plurality of data distribution centers, said data distribution centers  
5 being connected to the data network,

6 wherein data transmissions between the content servers and said data  
7 distribution centers use a multi-destination format so as to reduce congestion.

1 16. A data transmission system as recited in claim 15, wherein the multi-  
2 destination format uses multi-destination data packets, the multi-destination  
3 data packets include at least multiple destination fields and a data field.

1 17. A data transmission system as recited in claim 15, wherein the data  
2 network is the Internet.

1 18. A data transmission system as recited in claim 15, wherein said data  
2 distribution centers are utilized between the content servers and the  
3 requestors.

1 19. A data transmission system as recited in claim 15, wherein data  
2 transmissions between said data distribution centers use a multi-destination  
3 format.

1 20. A data transmission system as recited in claim 15, wherein data  
2 distribution centers service a large number of content servers and only  
3 temporarily store data being requested and to be transmitted to the  
4 requestors.

1 21. A system for transmitting data through a data network from servers to  
2 clients, said system comprising:

3 a plurality of data distribution centers coupled to the data network; and

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server modules provided in the servers, said server modules operate to receive data to be transmitted to the clients and to form multi-destination packets to carry the data to at least one of said data distribution centers,

7 wherein said data distribution centers receive the multi-destination  
8 packets from said server modules and operates to convert the multi-  
9 destination packets into single-destination packets and to delivery the single-  
10 destination packets to the appropriate clients.

1 22. A system as recited in claim 21, wherein each of the data distribution  
2 centers is in a geographically different location.

1 23. A system as recited in claim 21, wherein the data network is a global  
2 computer network.

1 24. A system as recited in claim 21, wherein the multi-destination packets  
2 include a plurality of destination locations and data.

25. A method for transferring data through a data network from a server to clients, wherein the improvement comprises transferring the data between the server and a data distribution center using a multi-destination format, thereby reducing congestion at the server.

26. A method as recited in claim 25, wherein the data distribution center does not normally store the data residing on the server but instead obtains the data from the server when needed.

27. In a data network, a method for delivering a response from a server to requests from clients, wherein the improvement comprises processing the response in a group of responses for the same resource so as to reduce congestion at the server.

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- 1 28. A system for sending data over the Internet, said system comprising:
- 2 means for receiving a plurality of requests for a particular resource
- 3 provided at a remote server on the Internet, the plurality of requests being
- 4 provided by different requestors;
- 5 means for retrieving the particular resource from the remote server
- 6 once for the plurality of requests to obtain the particular resource requested
- 7 by the plurality of requests; and
- 8 means for thereafter sending the particular resource to the different
- 9 requestors.

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